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PROCEEDINGS OF SCIENTIFIC SOCIETIES.

ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, BIOLOGICAL AND MICROSCOPICAL SECTION, Philadelphia, January 21, 1878.—Dr. R. S. Kenderdine in the chair. Mr. Ryder related some observations which he had made on the residual image in the retina, as to the changes of color it undergoes, and as to the length of time it remains after the real image has ceased to excite the retinal cones and rods. The matter was discussed at length by Dr. Seiler, Messrs. Zentmayer, Perot and Ryder.

Mr. Potts then made an interesting communication on carnivorous plants. In the course of his remarks he gave a full description of the *Drosera*, *Dionæa* and *Nepenthes*. Of the latter he showed two preparations of the pitchers, one mounted flat in balsam, and the other in a deep cell filled with benzole, both stained with hæmatoxylin. These beautiful preparations showed the peculiar distribution of the spiral vessels and excreting as well as absorbing glands. Mr. Potts called particular attention to the fact that the spiral vessels in this plant consist of four fibres, and do not anastomose, even in the midrib of the leaf, but are collected in bundles and run alongside of each other. He also described the peculiar openings of ducts along the serrated and inverted margin of the pitcher.

Feb. 4, 1878.—At the stated meeting of the section, Mr. Jos. Zentmeyer, exhibited a cheap form of dissecting microscope, which he had designed at the instance of Prof. Rothrock, of the University of Pennsylvania, adapted to the wants of his botanical class. He set forth the advantages of the new instrument as combining steadiness, convenience of manipulation and smallness of cost, which latter is generally an important item with students of minute vegetable and animal anatomy.

Dr. McQuillen made some interesting experiments upon reflex nervous action as illustrating Pfluger's laws. Further remarks were made by Profs. Hunt, White, Houston and Dr. Kenderdine in relation to Dr. McQuillen's experiments.

Mr. Potts exhibited mounted fragmentary specimens of ants taken from the pitcher of Nepenthes, a carnivorous plant, native of Australia and the East Indies. The insects had been thoroughly digested, not a particle of soluble organic matter or protoplasm was left inside the external shell of chitin, which forms the covering of the creatures. The specimen was therefore a very instructive one, as illustrating how completely carnivorous these plants have become. The most interesting part of their structure is the presence of the honey-secreting glands on the outside which attract the ants, which, when they venture still further up the pitcher, finally are bold enough to crawl up into its mouth, never more to return, and to be drowned, digested and appropriated to nourish the structures of the invidious destroyer.

Glands of a very remarkable form are found in great numbers upon the inside of the pitcher, whose function it seems is to secrete the solvent or digestive fluid; others open in the inturned rim of the mouth, which are regarded by Dr. Hunt, their discoverer, as the only vegetable gland with a proper excretory duct.

Mr. U. C. Smith exhibited a living specimen of *Actinophrys sol.*

Mr. Ryder then remarked .that he had recently seen a very curious structure in the epidermis of the skin of the soft part of a box tortoise, and indicated briefly the similarity of the horny dermal plates of this animal to those of the snakes. In continuation he observed that on making comparison of the neck vertebræ of the box tortoise with those of the great fossil armadilloes of South America, some remarkable and instructive similarities were noticed. Especially was this the case in regard to the hinge-like joint between the last vertebra of the neck and the first of the body. It indicated similarity of function, and was undoubtedly used by the armadillo to partially withdraw the head within the carapace as in the box tortoise, or at least to bring the head shield of the animal against the carapace or body shield in case of attack.

Dr. G. B. Dixon then called attention to a series of histological preparations by Dr. Carl Seiler which were referred to the conservator for examination and report.

On motion adjourned.

BOSTON SOCIETY OF NATURAL HISTORY.—February 6th. Prof. W. G. Farlow gave an account of recent researches on the development of lichens, and Dr. T. M. Brewer read somes notes on the birds of New England.

Feb. 20th.—Mr. M. E. Wadsworth read some notes on the petrography of Quincy and Rockport, and Mr. C. S. Minot made a communication on the histology of the grasshopper (*Caloptenus*).

AMERICAN GEOGRAPHICAL SOCIETY, New York.—February 27th. The President, Chief-Justice Daly, delivered his annual address upon the Geographical work of the world in 1877.

APPALACHIAN MOUNTAIN CLUB, Boston.—January 9th. Mr. S. H. Scudder delivered his address as retiring president, entitled A Year of Exploration in North America.

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SCIENTIFIC SERIALS.[1]

THE GEOGRAPHICAL MAGAZINE.—February. Language-map of the East Indies, II. Further India and the Indian Archipelago, by R. Cust. Memoirs of Hans Hendrik, the Greenland Eskimo,

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[1] The contents of these journals are for the most part selected.